

28. The targeted advertising delivery system of Claim 27, in which said privacy server is responsible for removing personal information from communications received from said set top box and assigning a unique code to such data for identification purposes.
29. The targeted advertising delivery system of Claim 27, in which said data center is responsible for receiving data and associated unique identifiers from said privacy server and determining at least one user model for each set top box based on said received data.
30. A computer program product for targeted advertising delivery comprising a computer usable medium having a computer readable program code means embodied in the computer usable medium for causing an application program to execute on a computer system, the computer readable program code comprising:
 - computer readable program code means for collecting set top box events;
 - computer readable program code means for deriving, in a privacy compliant manner, at least one user model based on said collected set top box events;
 - computer readable program code means for storing said at least one user model in a database of user models;
 - computer readable program code means for storing content to be delivered to a set top box;
 - computer readable program code means for selecting from said stored user models and said stored content those user models and content which have a high degree of correlativity;
 - computer readable program code means for transmitting said selected content to a set top box associated with said selected user model; and
 - computer readable program code means for presenting said content via said set top box.

REMARKS

As set forth in the amendment above, Claim 2 has been cancelled. Claims 1 and 3 through 30 are pending in the Application. In the above-referenced Office Action, the Examiner rejected Claims 1-3, 13-19, and 23 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,734,720 to Salganicoff (“Salganicoff”) and Claims 4-12, 20-22, and 24-30 under 35 U.S.C. §103(a) as unpatentable over Salganicoff in view of U.S. Patent No. 6,285,983 to Jenkins (“Jenkins”). Applicants respectfully traverse the Examiner’s rejections for the reasons set forth below.

On pages 11 and 12 of the above-referenced Office Action, the Examiner asserted that Claim 1 was unclear because the second element improperly stated that the invention derived “... at least one user model for each of said at least one set top boxes”, which the Examiner

interpreted to mean that the user model is derived from many set top boxes. The Examiner requested clarification from Applicants as to the interpretation of this claim element and recommended alternative language which she believed would clarify Applicants' claimed invention. Applicants appreciate the Examiner's suggestion and have amended Claims 1, 13, 16, 19, and 23 accordingly.

One aspect of Applicants' invention is the ability to create user models based on data which has been collected in a privacy compliant manner. To achieve this privacy compliance, as described in various parts of the specification including paragraphs 271 through 274, the present invention removes individual-specific information from data provided by a set top box. Such individual-specific data may include, but is not limited to, billing addresses, telephone numbers, names, credit card numbers, and the like. While the removal of such individual-specific information makes it impossible to determine the specific identity of a person operating a set top box, the present invention is nonetheless able to derive one or more user models per set top box which represent the person or persons operating the set top box.

The concept of privacy compliance, i.e. the removal of personally-identifiable information, is separate from that of data security. Data security is the transmission of data from a sender to a receiver in a manner which permits only the sender and receiver to know the contents of the data. This is typically achieved by encrypting the data using special "keys", such as passwords, which are known only to the sender and receiver. One such method for encrypting data is set forth in Salganicoff at column 43, lines 17-67, and column 44, lines 1 through 45. Data security is especially important in systems which transmit sensitive information, such as personally-identifiable information. In fact, at column 43, lines 4 through 8, Salganicoff teaches that, with respect to his invention, "Since the data passing from the set top multimedia terminal to the head end contains data which the customers may consider to be confidential, the two-way transmission system may be modified to encrypt the transmissions from the set top multimedia terminals to the head end." Salganicoff clearly teaches that data transmitted from a set top box contains personally-identifiable information, and that therefore the set top box data should be encrypted.

Applicants' independent Claims 1, 13, 16, 19, 23, and 30 include a limitation that data collected for use with the claimed invention be collected in a privacy compliant manner. Unlike Applicants' claimed invention, Salganicoff teaches that data collected from a set top box

contains data which customers consider confidential, and therefore such data should be encrypted. Salganicoff neither teaches nor suggests the use privacy compliant data collection techniques. The Court of Appeals for the Federal Circuit has consistently held that “Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick, 221 USPQ 481, 485 (Fed. Cir. 1984). Salganicoff clearly fails to teach or suggest structure positively recited and claimed in Applicants’ independent Claims 1, 13, 16, 19, 23, and 30. Thus, Applicants’ Claims 1, 13, 16, 19, 23, and 30 are patentable over Salganicoff, and Applicants respectfully request the Examiner remove her rejection to those claims.

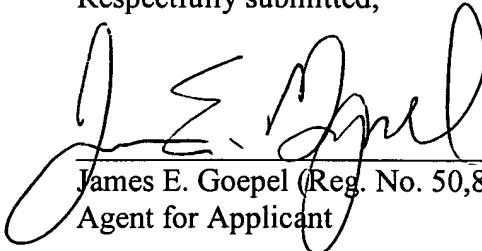
Furthermore, Claims 3-12, 14, 15, 17, 18, 20-22, and 24-26 depend from the independent claims described in the previous paragraph. The Court of Appeals for the Federal Circuit has consistently held that where a claim is dependent upon a patentable independent claim, the independent claim is *a fortiori* patentable because it contains all the limitations of the independent claim plus further limitations. See, e.g., Harness Intern. Inc. v. Simplimatic Engineering Co., 819 F.2d 1100, 1108 (Fed. Cir. 1987). Applicants reassert the arguments above for each of Claims 3-12, 14, 15, 17, 18, 20-22, and 24-26, and respectfully request that the Examiner find the claims patentable over Salganicoff.

With respect to the Examiner’s rejection of Applicants’ Claims 4-12, 20-22, and 24-30 as being obvious over Salganicoff in view of Jenkins, one skilled in the art would not be motivated to combine the Salganicoff and Jenkins patents as set forth in Applicants’ claims. As described above, Salganicoff teaches that data collected from a set top box should be encrypted as it is likely to contain data which the customer considers to be confidential. Obviousness “...can be rebutted if the applicant ... can show 'that the art in any material respect taught away' from the claimed invention.” In re Geisler, 116 F.3d 1465, 1469 (Fed.Cir.1997) (quoting In re Malagari, 499 F.2d 1297, 1303 (CCPA 1974)). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, ... would be led in a direction divergent from the path that was taken by the applicant.” Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1360 (Fed.Cir.1999). See also In re Haruna, 249 F.3d 1327, 1335 (Fed.Cir. 2001). Salganicoff clearly teaches away from privacy compliance, and one skilled in the art would not be motivated to combine Salganicoff and Jenkins in the manner claimed by Applicants. Applicants therefore respectfully request that the Examiner remove her rejection of Claims 4-12, 20-22, and 24-30.

CONCLUSION

Having responded to all objections and rejections set forth in the outstanding Office Action, it is submitted that Claims 1 and 3-30 are in condition for allowance and Notice to that effect is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, she is courteously requested to contact Applicants' undersigned representative.

Respectfully submitted,



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Version Illustrating Changes Made

1. An individually targeted content delivery method comprising:

collecting data associated with at least one set top box;
deriving at least one user model for each [of the at least one] set top box[es] based on the collected data;
storing the derived at least one user model and an identifier corresponding to the set top box from which the at least one user model is derived in a storage means for later retrieval;
selecting content and associated content attributes to be delivered to at least one set top box;
[transmitting]delivering the selected content and content attributes to the set top box;
causing the selected content to be presented by the at least one set top box when a correlation exists between the content attributes and the user model associated with the set top box.

2. **[CANCELLED]**

3. The individually targeted content delivery method of Claim 1, wherein data collected from said set top box includes a record of user interaction with said set top box.

4. The individually targeted content delivery method of Claim 1, further comprising the step of transmitting said data to a privacy server, which removes all personally identifiable information from said data before allowing said data to be used.

5. The individually targeted content delivery method of Claim 1, wherein said derived user model is based on derived user interests.

6. The individually targeted content delivery method of Claim 1, wherein said derived user model is based on a derived user demographic profile.

7. The individually targeted content delivery method of Claim 6, wherein said derived user model is further based upon derived user interests.

8. The individually targeted content delivery method of Claim 1, wherein said at least one set top box user model is derived using an inverse demographic matrix method.

9. The individually targeted content delivery method of Claim 1, wherein said content is repeatedly presented on said selected set top boxes until it has been determined that a user has experienced said content.

10. The individually targeted content delivery method of Claim 1, wherein said content must be experienced before user selected content can be experienced.

11. The individually targeted content delivery method of Claim 1, wherein said correlation is determined by said set top box.
12. The individually targeted content delivery method of Claim 1, wherein said correlation is determined prior to transmitting said content to said set top box, and wherein said transmitting step occurs only when said correlation is high enough to warrant said set top box presenting said content.
13. An individually targeted content delivery method comprising the steps of:
 - collecting set top box interaction data associated with at least one set top box in a privacy compliant manner;
 - deriving from said data at least one user model for each [of said at least one] set top box[es] using a user demographic profile and a user interest profile determined using an inverse demographic matrix method;
 - storing said derived at least one user model and an identifier corresponding to the set top box from which said at least one user model is derived in a storage means for later retrieval;
 - selecting content and associated content characteristics to be delivered to at least one set top box;
 - [transmitting]delivering said content to said set top box; and
 - causing said selected content to be presented by said at least one set top box when a correlation between said content attributes and said user model associated with said set top box exists.
14. The individually targeted content delivery method of Claim 13, wherein said correlation is determined by said set top box.
15. The individually targeted content delivery method of Claim 13, wherein said correlation is determined prior to transmitting said content to said set top box, and wherein said transmitting step occurs only when said correlation is high enough to warrant said set top box presenting said content.
16. An individually targeted content delivery method comprising the steps of:
 - collecting set top box interaction data associated with at least one set top box in a privacy compliant manner;
 - transmitting said set top box interaction data to a privacy server, which strips personally identifiable information from said data prior to allowing said data to be used;
 - deriving from said data at least one user model for each [of said at least one] set top box[es] using a user demographic profile and user interest profile as determined using an inverse demographic matrix;

storing said derived at least one user model and an identifier corresponding to the set top box from which said at least one user model is derived in a storage means for later retrieval;

selecting content and associated content characteristics to be delivered to at least one set top box;

[transmitting]delivering said content to said set top box; and

causing said content to be presented by said at least one set top box when a correlation between said content attributes and said user model associated with said set top box exists.

17. The individually targeted content delivery method of Claim 16, wherein said correlation is determined by said set top box.

18. The individually targeted content delivery method of Claim 16, wherein said correlation is determined prior to transmitting said content to said set top box, and wherein said transmitting step occurs only when said correlation is high enough to warrant said set top box presenting said content.

19. An individually targeted content delivery method comprising the steps of:

collecting set top box interaction data associated with at least one set top box in a privacy compliant manner;

deriving from said data at least one user model for each [of said at least one] set top box[es] using a user demographic profile and user interest profile as determined using an inverse demographic matrix;

storing said derived at least one user model and an identifier corresponding to the set top box from which said at least one user model is derived in a storage means for later retrieval;

selecting content and associated content characteristics to be delivered to at least one set top box;

[transmitting]delivering said content to said set top box; and

causing said content to be presented by said at least one set top box when a correlation between said content attributes and said user model associated with said set top box exists, and until it is determined that said content has likely been experienced.

20. The individually targeted content delivery method of Claim 19, wherein said content must be experienced before user selected content can be experienced.

21. The individually targeted content delivery method of Claim 19, wherein said correlation is determined by said set top box.

22. The individually targeted content delivery method of Claim 19, wherein said correlation is determined prior to transmitting said content to said set top box, and wherein said

transmitting step occurs only when said correlation is high enough to warrant said set top box presenting said content.

23. An individually targeted content delivery method comprising the steps of:

collecting set top box interaction data associated with at least one set top box in a privacy compliant manner;

transmitting said set top box interaction data to a privacy server, which strips any personally identifiable information from said data prior to allowing said data to be used by the system;

deriving from said data at least one user model for each [of said at least one] set top box[es] using a user demographic profile and user interest profile as determined using an inverse demographic matrix;

storing said derived at least one user model and an identifier corresponding to the set top box from which said at least one user model is derived in a storage means for later retrieval;

[selecting content to be delivered to at least one set top box;]

selecting content and associated content characteristics to be delivered to at least one set top box;

[transmitting]delivering said content to said set top box; and

causing said content to be presented by said at least one set top box when a correlation between said content attributes and said user model associated with said set top box exists, and until it is determined that said content has likely been experienced.

24. The individually targeted content delivery method of Claim 23, wherein said content must be experienced before user selected content can be experienced.

25. The individually targeted content delivery method of Claim 23, wherein said correlation is determined by said set top box.

26. The individually targeted content delivery method of Claim 23, wherein said correlation is determined prior to transmitting said content to said set top box, and wherein said transmitting step occurs only when said correlation is high enough to warrant said set top box presenting said content.

27. A targeted advertising delivery system, comprising:

a plurality of set top boxes;

a privacy server, communicatively connected to said [at least one]plurality of set top boxes; a data center, communicatively connected to said privacy server;

a content input means, which allows a content owner to submit content to the data center; and

a user model selector, which allows a content owner to select user model attributes corresponding to a group to which particular content is to be delivered.

28. The targeted advertising delivery system of Claim 27, in which said privacy server is responsible for removing personal information from communications received from said set top box and assigning a unique code to such data for identification purposes.
29. The targeted advertising delivery system of Claim 27, in which said data center is responsible for receiving data and associated unique identifiers from said privacy server and determining at least one user model for each set top box based on said received data.
30. A computer program product for targeted advertising delivery comprising a computer usable medium having a computer readable program code means embodied in the computer usable medium for causing an application program to execute on a computer system, the computer readable program code comprising:
 - computer readable program code means for collecting set top box events;
 - computer readable program code means for deriving, in a privacy compliant manner, at least one[a] user model based on said collected set top box events;
 - computer readable program code means for storing said at least one user model in a database of user models;
 - computer readable program code means for storing content to be delivered to a set top box;
 - computer readable program code means for selecting from said stored user models and said stored content those user models and content which have a high degree of correlativity;
 - computer readable program code means for transmitting said selected content to a set top box associated with said selected user model; and
 - computer readable program code means for presenting said content via said set top box.